

ABSTRACT OF THE DISCLOSURE

A probe array comprises a plurality of probes immobilized at a plurality of matrix sites on a substrate for capturing a target substance, wherein the probes are sequentially synthesized at the matrix sites on the substrate until a desired length, the probes are different from each other, and a labeling compound is coupled to each terminus of the probes in a final step of the synthesis. The probe array of the invention allows sensitive and reliable detection of the target substance. A method of evaluating the amount of the fully synthesized probes at respective matrix sites is also provided.